CLAIMS

1. Permanent-magnet excited synchronous motor (1), comprising tooth coils (6) in the stator (2), and a rotor (4) having structural means to dampen the fifth harmonic and/or the seventh harmonic of the rotor field.

2. Permanent-magnet excited synchronous motor (1), characterized in that the rotor (4) and/or the stator (2) have a skew which is between half of a slot pitch and 60 % of a slot pitch (Tn) with reference to the synchronous motor (1).

3. Permanent-magnet excited synchronous motor (1) according to claim 1 or 2, characterized in that a pole coverage (α) of 85% is provided.

4. Permanent-magnet excited synchronous motor (1) according to claim 1, characterized in that (3) of the rotor (4) and/or the stator (2) have a skew which is between half of a slot pitch and 0.4285 times a slot pitch (Tn) with reference to the synchronous motor (1)..

5. Permanent-magnet excited synchronous motor (1) according to claim 1 or 4, characterized in that a pole coverage (α) of 80% is provided.